Exhibit P

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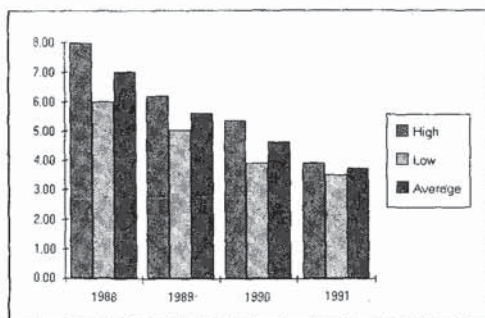
Column chart.

sion that identifies a command file. *See also* COM (definition 3).

COM \C`O-M´\ *n.* **1.** A name reserved by the MS-DOS operating system for serial communications ports. For example, if a modem is connected to one serial port and a serial printer to another, the devices are identified as COM1 and COM2 by the operating system. **2.** Acronym for **C**omponent **O**bject **M**odel. A specification developed by Microsoft for building software components that can be assembled into programs or add functionality to existing programs running on Microsoft Windows platforms. COM components can be written in a variety of languages, although most are written in C++, and can be unplugged from a program at run time without having to recompile the program. COM is the foundation of the OLE (object linking and embedding), ActiveX, and DirectX specifications. *See also* ActiveX, component (definition 2), DirectX, OLE. **3.** The extension reserved by MS-DOS for a type of executable binary (program) file limited to a single 64-kilobyte (KB) segment. COM files are often used for utility programs and short routines. They are not supported in OS/2. **4.** Acronym for **com**puter-**o**utput **m**icrofilm. Microfilm that can record data from a computer.

COM1 \kom-wən´\ *n.* A serial communications port in Wintel systems. COM1 is usually specified by the I/O range 03F8H, is usually associated with interrupt request line IRQ4, and in many systems is used to connect an RS232 serial mouse. *See also* IRQ.

COM2 \kom-to͞o´\ *n.* A serial communications port in Wintel systems. COM2 is usually specified by the I/O range 02F8H, is usually associated with interrupt request line IRQ3, and in many systems is used to connect a modem. *See also* IRQ.

COM3 \kom-thrē´\ *n.* A serial communications port in Wintel systems. COM3 is usually specified by the I/O range 03E8H, is usually associated with interrupt request line IRQ4, and in many systems is used as an alternative to COM1 or COM2 if the latter is being used by some other peripheral. *See also* IRQ.

combinatorial explosion \kom-bə-nə-tōr`ē-əl eks-plō´zhən\ *n.* A condition inherent in certain types of mathematical problems in which small increases in the problem's size (number of data items or parameters of the operation) lead to enormous increases in the time required to obtain a solution. *See also* combinatorics.

combinatorics \kom`bə-nə-tōr´iks\ *n.* A branch of mathematics related to probability and statistics, involving the study of counting, grouping, and arrangement of finite sets of elements. Combinatorics involves the two concepts of combinations and permutations. A combination is the grouping of elements taken from a larger set without regard to the order of the elements in each group; for example, taking two elements at a time from a set of four objects (A, B, C, and D) creates six combinations of objects: AB, AC, AD, BC, BD, and CD. A permutation is a grouping of elements taken from a larger set with regard to the order of the elements. For example, in making permutations of two objects from the same set of four objects, there would be four candidates to choose from for the first selection (A), and three left over to choose from for the second selection (B), or twelve permutations in all: AB, AC, AD, BA, BC, BD, CA, CB, CD, DA, DB, DC. *See also* combinatorial explosion.

COMDEX \kom´deks\ *n.* Any of a series of annual computer trade shows operated by Softbank COMDEX, Inc. One of these shows takes place in Las Vegas each November and is the largest computer trade show in the United States.

Comité Consultatif International Télégraphique et Téléphonique \kō-mē-tā` kōn-so͞ol-tä-tēf` an-târ-nä-sē-ō-näl` tā`lā-grä-fēk` ā tā`lā-fō-nēk`\ *n. Also called* International Telegraph and Telephone Consultative Committee. *See* CCITT.

comma-delimited file \kom`ə-də-lim`ə-təd fīl´\ *n.* A data file consisting of fields and records, stored as text, in which the fields are separated

interpreted language, language processor, object code.

compile time \kəm-pīl´ tīm`\ *n.* **1.** The amount of time required to perform a compilation of a program. Compile time can range from a fraction of a second to many hours, depending on the size and complexity of the program, the speed of the compiler, and the performance of the hardware. *See also* compiler (definition 2). **2.** The point at which a program is being compiled (i.e., most languages evaluate constant expressions at compile time but evaluate variable expressions at run time). *See also* link time, run time.

compile-time binding \kəm-pīl´tīm bīn`dēng\ *n.* Assignment of a meaning to an identifier (such as a function name or a constant) in a program at the time the program is compiled rather than at the time it is run. *Compare* run-time binding.

complement \kom´plə-ment`\ *n.* Loosely, a number that can be thought of as the "mirror image" of another number written to the same base, such as base 10 or base 2. Complements are commonly used to represent negative numbers. Two types of complements are encountered in computer-related contexts: radix-minus-1 complements and true complements. A radix-minus-1 complement is known in the decimal system as a nine's complement and in the binary system as a one's complement. True complements are known in the decimal system as ten's complement and in binary as two's complement—a form commonly used to represent negative numbers in processing. *See also* complementary operation, nine's complement, one's complement, ten's complement, two's complement.

complementary metal-oxide semiconductor \kom-plə-men`tər-ē met-əl-oks´īd sem´ī kən-duk`tər, sem´ē kən-duk`tər\ *n. See* CMOS.

complementary operation \kom-plə-men`tər-ē op`ər-ā´shən\ *n.* In Boolean logic, an operation that produces the opposite result from that of another operation performed on the same data. For example, if A is true, NOT A (its complement) is false. *See also* Boolean algebra.

completeness check \kəm-plēt´nəs chek`\ *n.* A survey to determine that all data required in a record is present. *Compare* consistency check.

complex instruction set computing \kom-pleks` in-struk`shən set kəm-pyōō´tēng\ *n. See* CISC.

complex number \kom`pleks num´bər\ *n.* A number of the form *a* + *bi,* where *a* and *b* are real numbers and *i* is the square root of −1, called the imaginary unit. Complex numbers can be plotted as points on a two-dimensional plane called the complex plane. The *a* number is plotted along the plane's horizontal axis (the real axis), and the *b* number is plotted along the vertical axis (the imaginary axis). *Compare* real number.

comp. newsgroups \komp`dot nōōz´grōōps\ *n.* Usenet newsgroups that are part of the comp. hierarchy and have the prefix comp. These newsgroups are devoted to discussions of computer hardware, software, and other aspects of computer science. Comp. newsgroups are one of the seven original Usenet newsgroup hierarchies. The other six are misc., news., rec., sci., soc., and talk. *See also* newsgroup, traditional newsgroup hierarchy, Usenet.

component \kəm-pō´nənt\ *n.* **1.** A discrete part of a larger system or structure. **2.** An individual modular software routine that has been compiled and dynamically linked, and is ready to use with other components or programs. *See also* compile, component software, link (definition 1), program, routine.

Component Object Model \kəm-pō`nənt ob´jekt mod`əl\ *n. See* COM (definition 2).

component software \kəm-pō`nənt soft´wâr\ *n.* Modular software routines, or components, that can be combined with other components to form an overall program. A programmer can use and reuse an existing component and not have to understand its inner workings, just how to have another program or component call it and pass data to and from it. *Also called* componentware. *See also* component, program, routine.

componentware \kəm-pō´nənt-wâr`\ *n. See* component software.

COM port or **comm port** \kom´ pōrt\ *n.* Short for **com**munications **port,** the logical address assigned by MS-DOS (versions 3.3 and higher) and Microsoft Windows (including Windows 95 and Windows NT) to each of the four serial ports on an IBM Personal Computer or a PC compatible. COM ports also have come to be known as the actual serial ports

Computer Press Association \kəm-pyōō`tər pres´-ə-sō-sē-ā`shən\ *n.* A trade organization of journalists, broadcasters, and authors who write or report about computer technology and the computer industry.

Computer Professionals for Social Responsibility \kəm-pyōō`tər prə-fesh`ə-nəlz fər sō`shəl rə-spon-sə-bil´ə-tē\ *n. See* CPSR.

computer program \kəm-pyōō´tər prō`gram\ *n.* A set of instructions in some computer language intended to be executed on a computer so as to perform some task. The term usually implies a self-contained entity, as opposed to a routine or a library. *See also* computer language. *Compare* library (definition 1), routine.

computer-readable \kəm-pyōō`tər-rē´də-bl\ *adj.* Of, pertaining to, or characteristic of information that can be interpreted and acted on by a computer. Two types of information are referred to as computer-readable: bar codes, magnetic tape, magnetic-ink characters, and other formats that can be scanned in some way and read as data by a computer; and machine code, the form in which instructions and data reach the computer's microprocessor.

computer revolution \kəm-pyōō´tər rev-ə-lōō`-shən\ *n.* The societal and technological phenomenon involving the swift development and wide-spread use and acceptance of computers—specifically single-user personal computers. The impact of these machines is considered revolutionary for two reasons. First, their appearance and success were rapid. Second, and more important, their speed and accuracy produced a change in the ways in which information can be processed, stored, and transferred.

computer science \kəm-pyōō`tər sī´əns\ *n.* The study of computers, including their design, operation, and use in processing information. Computer science combines both theoretical and practical aspects of engineering, electronics, information theory, mathematics, logic, and human behavior. Aspects of computer science range from programming and computer architecture to artificial intelligence and robotics.

computer security \kəm-pyōō`tər sə-kyər´ə-tē\ *n.* The steps taken to protect a computer and the information it contains. On large systems or those handling financial or confidential data, computer security requires professional supervision that combines legal and technical expertise. On a microcomputer, data protection can be achieved by backing up and storing copies of files in a separate location, and the integrity of data on the computer can be maintained by assigning passwords to files, marking files "read-only" to avoid changes to them, physically locking a hard disk, storing sensitive information on floppy disks kept in locked cabinets, and installing special programs to protect against viruses. On a computer to which many people have access, security can be maintained by requiring personnel to use passwords and by granting only approved users access to sensitive information. *See also* bacterium, encryption, virus.

computer simulation \kəm-pyōō`tər sim-yə-lā´-shən\ *n. See* simulation.

computer system \kəm-pyōō´tər si`stəm\ *n.* The configuration that includes all functional components of a computer and its associated hardware. A basic microcomputer system includes a console, or system unit, with one or more disk drives, a monitor, and a keyboard. Additional hardware, called *peripherals,* can include such devices as a printer, a modem, and a mouse. Software is usually not considered part of a computer system, although the operating system that runs the hardware is known as system software.

computer telephone integration \kəm-pyōō`tər tel`ə-fōn in-tə-grā´shən\ *n.* A process allowing computer applications to answer incoming calls, provide database information on-screen at the same time the call comes in, automatically route and reroute calls by drag-and-drop, automatically dial and speed-dial outgoing calls from a computer-resident database, and identify incoming customer calls and transfer them to predetermined destinations. *See also* drag-and-drop.

computer typesetting \kəm-pyōō`tər tīp´set-ēng\ *n.* Typesetting operations that are partially or totally controlled by computers. Partial control can involve the transmittal of text directly from the source to the typesetter, without a paste-up stage. Full computerization can include the digitization of all graphics. which would then also be transmitted directly to the typesetter and regenerated without paste-up.

IBM PC.

I-CASE \ī´kās, ī´C-A-S-E´\ *n.* Acronym for Integrated Computer-Aided Software Engineering. Software that performs a wide variety of software engineering functions, such as program design, coding, and testing parts or all of the completed program.

ICM \ī´C-M´\ *n. See* image color matching.

ICMP \ī´C-M-P´\ *n.* Acronym for Internet Control Message Protocol. A network-layer (ISO/OSI level 3) Internet protocol that provides error correction and other information relevant to IP packet processing. For example, it can let the IP software on one machine inform another machine about an unreachable destination. *See also* communications protocol, IP, ISO/OSI model, packet (definition 1).

icon \ī´kon\ *n.* A small image displayed on the screen to represent an object that can be manipulated by the user. By serving as visual mnemonics and allowing the user to control certain computer actions without having to remember commands or type them at the keyboard, icons are a significant factor in the user-friendliness of graphical user interfaces. See the illustration. *See also* graphical user interface.

Icon.

iconic interface \ī-kon´ik in´tər-fās\ *n.* A user interface that is based on icons rather than on typed commands. *See also* graphical user interface, icon.

icon parade \ī´kon pər-ād´\ *n.* The sequence of icons that appears during the boot-up of a Macintosh computer.

.id \dot´I-D´\ *n.* On the Internet, the major geographic domain specifying that an address is located in Indonesia.

IDE \ī´D-E´\ *n.* **1.** Acronym for Integrated Device Electronics. A type of disk-drive interface in which the controller electronics reside on the drive itself, eliminating the need for a separate adapter card. The IDE interface is compatible with the controller used by IBM in the PC/AT computer but offers advantages such as look-ahead caching. **2.** *See* integrated development environment.

identifier \ī-den´tə-fī´ər, ə-den´tə-fī´ər\ *n.* Any text string used as a label, such as the name of a procedure or a variable in a program or the name attached to a hard disk or floppy disk. *Compare* descriptor.

idle \ī´dl\ *adj.* **1.** Operational but not in use. **2.** Waiting for a command.

idle character \ī´dl kâr´ək-tər\ *n.* In communications, a control character transmitted when no other information is available or ready to be sent. *See also* SYN.

idle interrupt \ī´dl in´tər-upt\ *n.* An interrupt that occurs when a device or process becomes idle.

idle state \ī´dl stāt´\ *n.* The condition in which a device is operating but is not being used.

IDSL \ī´D-S-L´\ *n.* Acronym for Internet digital subscriber line. A high-speed digital communications service that provides Internet access as fast as 1.1 Mbps (megabits per second) over standard telephone lines. IDSL uses a hybrid of ISDN and digital subscriber line technology. *See also* digital subscriber line, ISDN.

.ie \dot´I-E´\ *n.* On the Internet, the major geographic domain specifying that an address is located in Ireland.

IE \I-E´\ *n.* **1.** Acronym for information engineering. A methodology for developing and maintaining information-processing systems, including computer systems and networks, within an organization. **2.** *See* Internet Explorer.

IEEE \ī´E-E-E´, ī´trip-l-E´\ *n.* Acronym for Institute of Electrical and Electronics Engineers. An organization of engineering and electronics professionals

Win32s \win`thər-tē-tōō`S´\ *n*. A subset of the Win32 application programming interface that works under Windows 3.*x*. By including the Win32s software, which is distributed as freeware, an application can gain in performance from using the 32-bit instructions available on 80386 and higher processors while running under Windows 3.*x*. *See also* 32-bit machine, 80386DX, central processing unit, Win32.

Winchester disk \win´che-stər disk`\ *n*. An early IBM name for a hard disk. The term is derived from IBM's internal code name for its first hard disk, which stored 30 megabytes (MB) and had a 30-millisecond access time, reminding its inventors of a Winchester .30-caliber rifle known as a ".30-.30."

window \win´dō\ *n*. In applications and graphical interfaces, a portion of the screen that can contain its own document or message. In window-based programs, the screen can be divided into several windows, each of which has its own boundaries and can contain a different document (or another view into the same document).

window definition function \win´dō def-ə-nish`-ən funk-shən\ *n*. A resource associated with a window in a Macintosh application. The Macintosh Window Manager calls this function to perform such actions as drawing and resizing the window. *Also called* WDEF.

windowing environment \win´dō-ēng en-vī`rən-ment, en-vī`ərn-ment\ *n*. An operating system or shell that presents the user with specially delineated areas of the screen called *windows*. Windowing environments typically allow windows to be resized and moved around on the display. The Macintosh Finder, Windows, and the OS/2 Presentation Manager are all examples of windowing environments. *See also* graphical user interface, window.

window random access memory \win`dō  ran-dəm ak`ses mem´ə-rē\ *n. See* WRAM.

Windows \win´dōz\ *n*. An operating system introduced by Microsoft Corporation in 1983. Windows is a multitasking graphical user interface environment that runs on both MS-DOS–based computers (Windows and Windows for Workgroups) and as a self-contained operating system (Windows 95, Windows NT). Windows provides a standard inter-

face based on drop-down menus, **windowed** regions on the screen, and a pointing device **such** as a mouse.

Windows 95 \win`dōz nīn-tē-fīv´\ *n*. An operating system with a graphical user interface for 80386 and higher processors, released by Microsoft Corporation in August 1995. Intended to replace Windows 3.11, Windows for Workgroups 3.11, and MS-DOS, Windows 95 is a complete operating system, rather than a shell that requires MS-DOS, as does Windows 3.*x*. For backward compatibility, Windows 95 can run MS-DOS software. Under Windows 95, filenames can be up to 255 characters long and may include dots and spaces. The My Computer icon on the Windows 95 desktop provides access to the system files and resources, and the Network Neighborhood icon provides access to any network (if the computer is attached to one). See the illustration. Windows 95 supports the Plug and Play method for installing and configuring hardware and can access Windows, NetWare, and UNIX networks. The minimum configuration for Windows 95 is an 80386 processor with 4 MB of RAM, but an i486 or higher processor with at least 8 MB of RAM is recommended. *See also* MS-DOS, NetWare, Plug and Play, Windows, Windows for Workgroups.
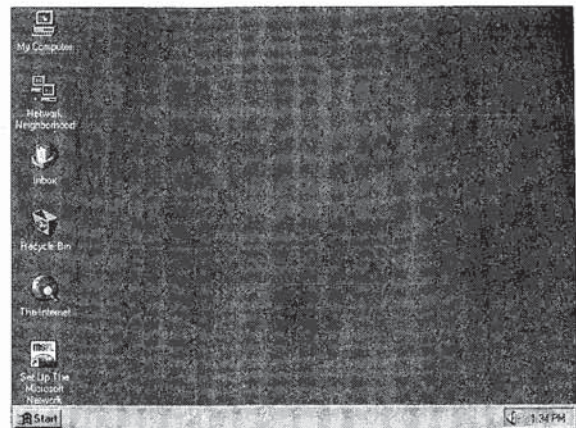
Windows 95.

Windows application \win´dōz a-plə-kā`shən\ *n*. A software application designed for use with the Microsoft Windows environment.